(No Model.) 3 Sheets—Sheet 1.

# J. JACOBS.

## ILLUMINATING TILE AND ROOFING PLATE.

No. 385,270. Patented June 26, 1888.

Fig. 1

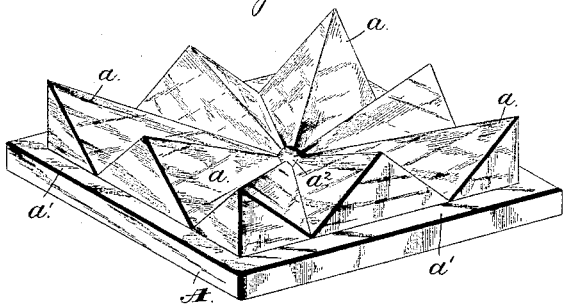



Fig. 2.

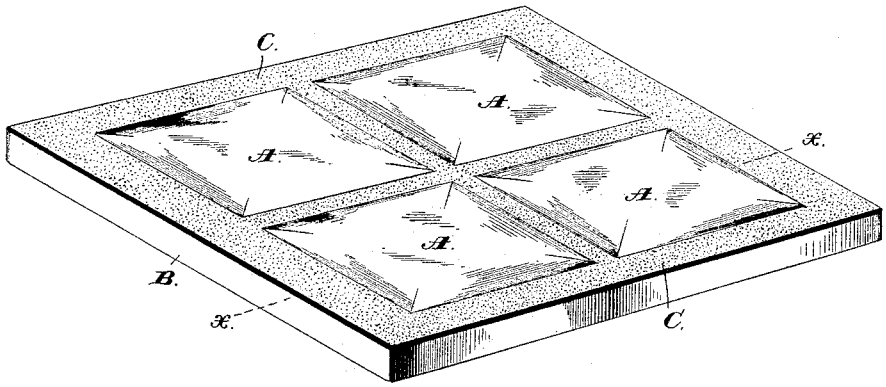
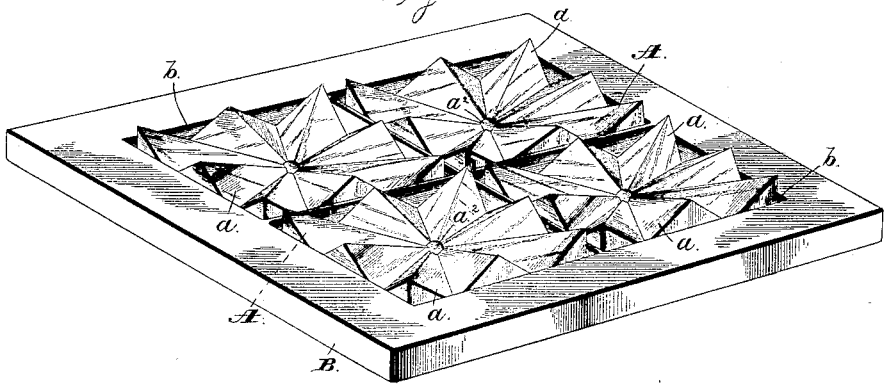



Fig. 3.

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Jacob Jacobs, by
Pindle and Russell, his Attys

N. PETERS, Photo-Lithographer, Washington, D. C.

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## ILLUMINATING TILE AND ROOFING PLATE.

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Fig. 4.

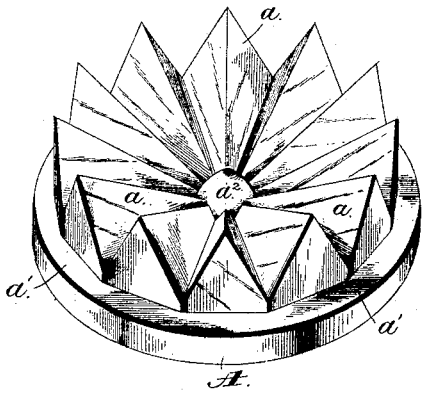



Fig. 5.

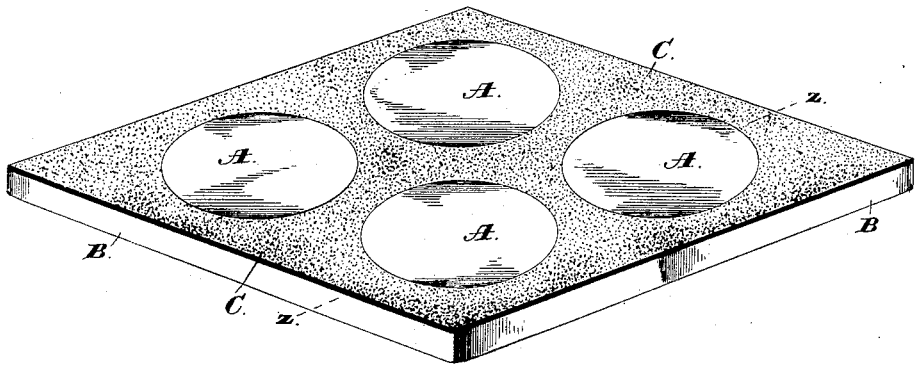
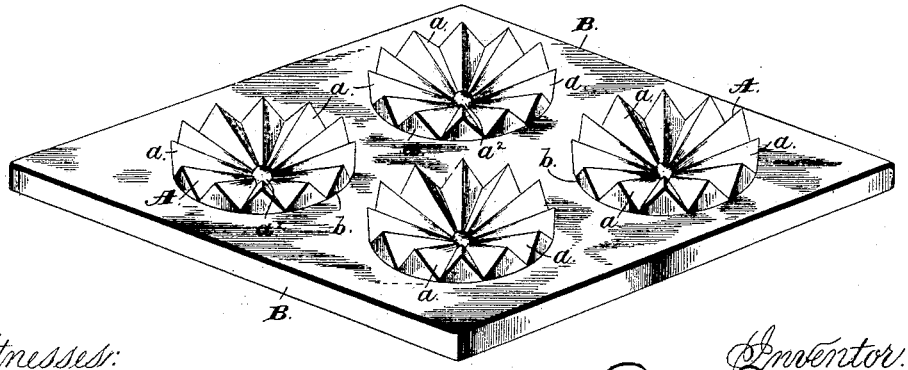



Fig. 6.

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## ILLUMINATING TILE AND ROOFING PLATE.

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Fig. 7.

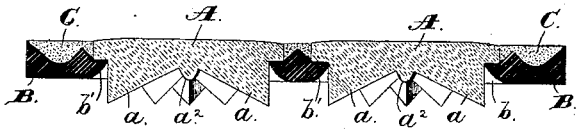
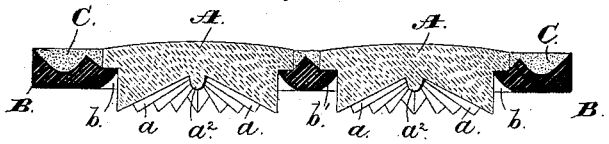



Fig. 8.

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# UNITED STATES PATENT OFFICE.

JACOB JACOBS, OF NEW YORK, N. Y.

## ILLUMINATING-TILE AND ROOFING-PLATE.

SPECIFICATION forming part of Letters Patent No. 385,270, dated June 26, 1888.

Application filed March 19, 1888. Serial No. 267,677. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB JACOBS, of New York city, in the county of New York, and in the State of New York, have invented certain new and useful Improvements in Illuminating-Tiles and Roofing-Plates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view, from the lower side, of one of my square lenses. Figs. 2 and 3 are like views, from the upper and lower sides, respectively, of a tile containing said lens. Fig. 4 is a perspective view, from the lower side, of my round lens. Figs. 5 and 6 are like views, from the upper and lower sides, respectively, of a tile containing said lens; and Figs. 7 and 8 are cross-sections upon lines $x\,x$ and $z\,z$, respectively, of Figs. 2 and 5.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to increase the capacity of illuminating-lenses; and to such end my said invention consists in the construction of the lens, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I provide upon the lower face of a lens, A, a series of ribs, $a$ and $a$, which radiate from or near the center of the lens and increase in lateral and vertical dimensions from their inner ends to their outer ends, which latter are vertical, and each terminates a short distance from the edge of said lens, so as to leave at such point a horizontal bearing, $a'$. At the center of said lower face is preferably formed a semi-spherical boss, $a^2$; but such may be omitted, if desired, and the inner ends of the angular ribs intersect.

The lenses A may be round or square, or have any desired circumferential form, without affecting their operation, the essential feature of each being the large number of inclined faces, which act to reflect and refract the light over a large area and give to the lens a largely-increased capacity.

For the setting of the round lens I provide a metal plate, B, which has at suitable points openings $b$ and $b$, that correspond to and receive the lower ribbed portions of the lenses, while immediately around each light-opening is provided a horizontal seat, $b'$, for the reception of the bearing or face $a'$ of a lens. The upper face of said plate is recessed, as shown in Fig. 8, and within the same, between the lenses, is placed a filling of concrete, C, or other suitable plastic material, by which means the upper surface of the completed tile is composed wholly of cement and glass and furnishes a firm foothold. The metal plate for the square lens is like the plate for the round lens, except that its light-openings are square instead of round.

Having thus described my invention, what I claim is—

1. As an improvement in illuminating-tiles, a lens which upon its lower side is provided with a series of radiating angular ribs, substantially as and for the purpose specified.

2. As an improvement in illuminating-tiles, a lens which upon its lower side is provided with a series of radiating angular ribs that increase in transverse dimensions from their inner ends outward, substantially as and for the purpose shown.

3. As an improvement in illuminating-tiles, a lens which upon its lower side is provided with a series of radiating ribs that increase in transverse dimensions from their inner ends outward and have each an outward and downward inclination, substantially as and for the purpose set forth.

4. As an improvement in illuminating-tiles, a lens which upon its lower side is provided with a series of radiating angular ribs and around and above the outer ends of such ribs has a bearing-face, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of December, A. D. 1887.

JACOB JACOBS.

Witnesses:
GEO. S. PRINDLE,
HENRY C. HAZARD.